

2022 Missouri Wild Turkey Brood Survey Results

Nicholas Oakley – Wild Turkey Program Leader

Carly Glick – Turkey Program Assistant

Missouri Department of Conservation

31 October 2022

The Missouri Department of Conservation (MDC) has conducted a wild turkey brood survey annually since 1959. During the survey, MDC staff and citizen volunteers record turkey observations during June, July, and August to determine the success of the hatch. Data are collected at the county level and reported statewide and by Turkey Productivity Region, which are counties grouped by similar land cover composition (Figure 1). Each year, hundreds of staff and thousands of citizens participate in the survey, and we are grateful for their contribution. I would also like to thank those staff involved with distributing survey cards and entering the thousands of turkey observations obtained during the survey. The turkey brood survey provides important information for the Conservation Department's Wild Turkey Management Program, and the large dataset we have obtained since the survey was initiated would not have been possible without the dedication of staff and our citizen volunteers.

In 2022, MDC staff and citizen volunteers recorded observations of over 70,000 turkeys during the three-month survey. The 2022 statewide poult-to-hen ratio (PHR) was 1.0, which was the same as the 2021 and 2020 PHR and 9% greater than the previous five-year average (Figure 1, Figure 2, Table 1). However, this year's PHR was 14% lower than the 10-year average and 21% lower than the 20-year average (Table 1). Regional PHRs in 2022 ranged from 0.6 in the West Prairie Region to 2.4 in the Mississippi Lowlands Region (Table 1). Compared to the five-year averages, production in 2022 was greater in the Lindley Breaks, Mississippi Lowlands, Northeast, Ozark Border, and Ozarks West Regions but lower in the Northwest, Ozarks East, Union Breaks, and West Prairie Regions (Table 1).

At the statewide scale, 38% of hens were observed with a brood, which was down from 40% in 2021 but was 9% greater than the 5-year average (Table 2). The percentage of hens observed with a brood ranged from 30% in the West Prairie Region to 59% in the Northwest Region (Table 2). Statewide, the average number of poults per brood was 3.8, which was down from 4.0 in 2021 and equal to the five-year average (Table 2). The average number of poults per brood ranged from 3.4 in the Mississippi Lowlands Region to 5.4 in the Northwest Region (Table 2).

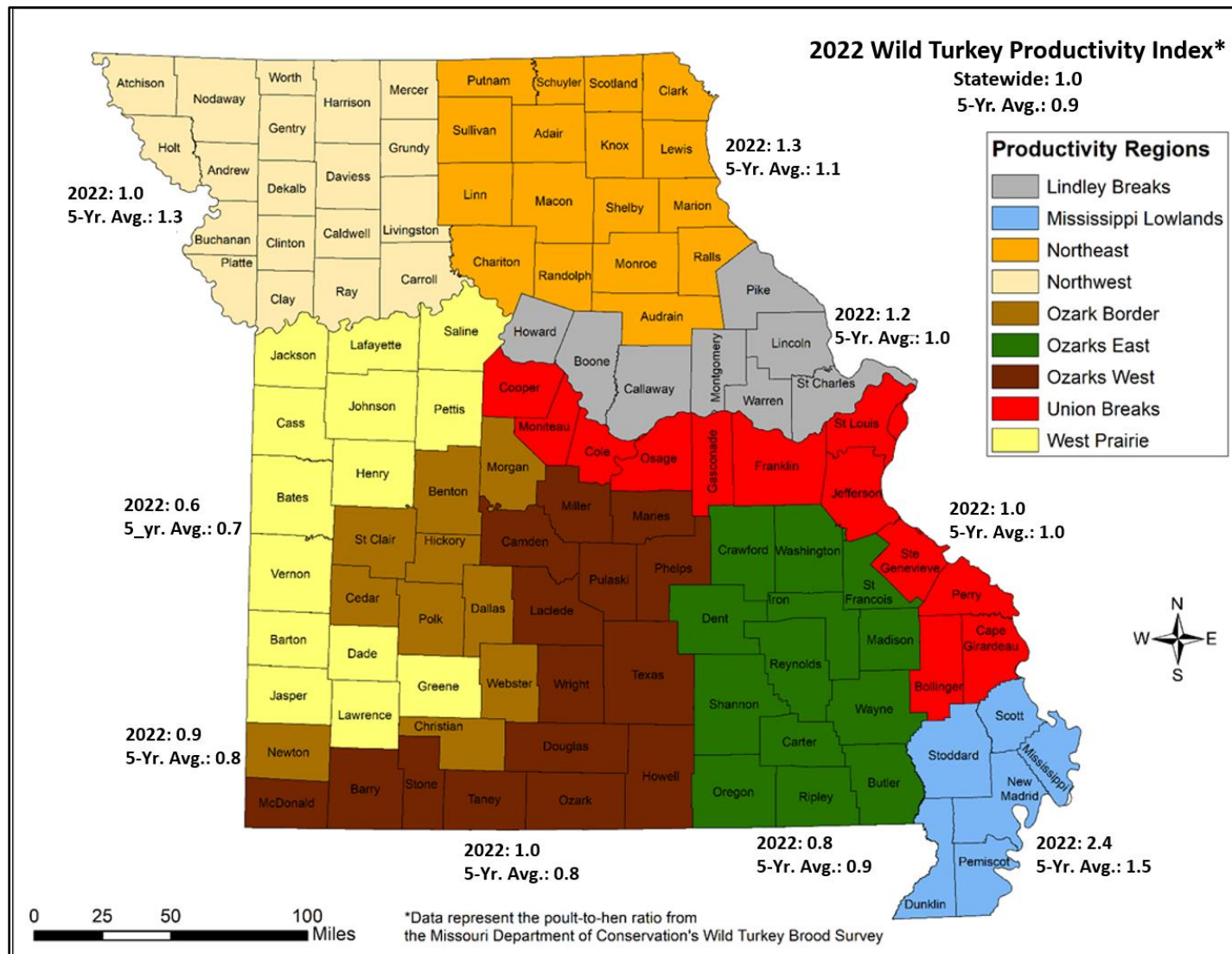


Figure 1. Index (poult-to-hen ratio) of Missouri wild turkey production by Turkey Productivity Region. Data were obtained during the Conservation Department's 2022 Wild Turkey Brood Survey and are compared to the previous five-year average.

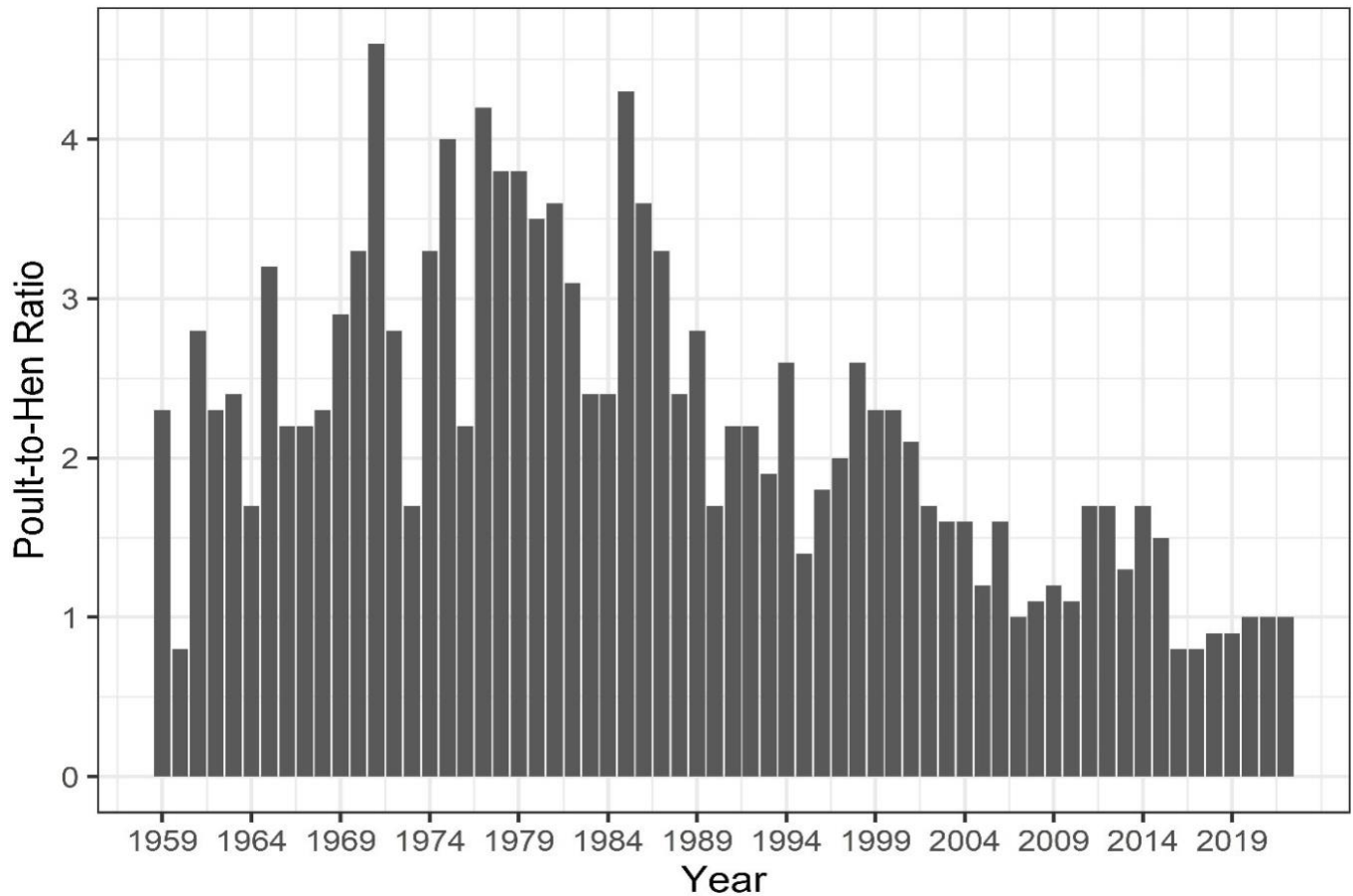


Figure 2. Statewide wild turkey productivity index (poult-to-hen ratio) in Missouri based on observations during the Conservation Department’s Wild Turkey Brood Survey, 1959-2022.

Table 1. Index (poult-to-hen ratio) of Missouri turkey production by Turkey Productivity Region (Figure 2). Data were obtained during the 2022 Wild Turkey Brood Survey and are compared to previous years. For each interval value, the percent change indicates how the 2022 index compares to the previous year or the average for periodic intervals.

Productivity Region	2022 Index	1-Year (2021) Change	5-Year (2017-2021) Change	10-Year (2012-2021) Change	20-Year (2002-2021) Change
Lindley Breaks	1.2	No Change	13%	-2%	-12%
MS Lowlands	2.4	No Change	58%	62%	26%
Northeast	1.3	30%	16%	4%	1%
Northwest	1.0	-23%	-21%	-26%	-27%
Ozark Border	0.9	-10%	15%	-14%	-22%
Ozarks East	0.8	-20%	-13%	-40%	-46%
Ozarks West	1.0	-9%	25%	-8%	-19%
Union Breaks	1.0	-9%	-2%	-15%	-23%
West Prairie	0.6	-14%	-17%	-36%	-44%
*Statewide	1.0	No Change	9%	-14%	-21%

^aStatewide totals include observations where Productivity Region was not recorded on the survey form.

Table 2. Wild Turkey Brood Survey data by Turkey Productivity Region (Figure 2). Data were obtained from Missouri's Wild Turkey Brood Survey conducted in June, July, and August 2022.

Productivity Region	% Hens w/ Brood	Average Brood Size	Poult-to- Hen Ratio	Gobbler-to- Hen Ratio
Lindley Breaks	43%	4.1	1.2	0.7
MS Lowlands	40%	3.4	2.4	0.8
Northeast	45%	3.8	1.3	0.7
Northwest	59%	5.4	1.0	0.8
Ozark Border	40%	4.0	0.9	0.6
Ozarks East	31%	3.8	0.8	0.4
Ozarks West	37%	4.0	1.0	0.7
Union Breaks	39%	3.5	1.0	1.0
West Prairie	30%	3.7	0.6	0.9
^aStatewide	38%	3.8	1.0	0.7

^aStatewide totals include observations where Productivity Region was not recorded on the survey form.